

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 99.28**WELDING INSPECTION REPORT****Resident Engineer:**Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-021530**Date Inspected:** 07-Mar-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC) Chanxing Island**Location:** Shanghai, China**CWI Name:** Mr. Qui Wen**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG Segment**Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance Inspector (QA), Vibin Kumar Selvanayaham, was present during the times noted above for observations relative to the work being performed.

Ultrasonic Testing (UT) – NWIT Document No: 008477

This QA inspector performed UT of approximately 10% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector generated an UT report for this date. The members are identified as OBG Bike Path. The weld designations reviewed are as follows:

1. DP3174-001-018, 393
2. SEG3013AH-039

Magnetic Particle Testing (MT) – NWIT Document No's: 008477

This QA inspector performed MT of approximately 15% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector generated an MT report for this date. The members are identified as OBG Bike Path. The weld designations reviewed are as follows:

1. SBDP-P1-027~039-001, 002
2. SBDP-P2-013-001, 002
3. SBDP-P3-055~073-001, 002

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### Bay 14

This QA Inspector observed the following work in progress:

Shielded Metal Arc Welding (SMAW) welding of weld joint SEG3013AH-176 located on Floor Beam to Grillage of OBG Segment 13AW. ZPMC Welder is identified as 066361. ZPMC Quality Control (QC) is identified as Mr. Liu Fang. The welding variables recorded by QC appeared to comply with the Applicable WPS-B-P-2214-Tc-U4b-FCM-1.

Sub Merged Arc (SAW) welding of weld joint SEG3013-012 located on deck panel to deck panel splice weld at cross beam side of OBG Segment 13AW. ZPMC Welder is identified as 045265. ZPMC Quality Control (QC) is identified as Mr. Liu Feng. The welding variables recorded by QC appeared to comply with the Applicable WPS-B-T-2221-B-L2c-S-2.

Flux Core Arc Welding (FCAW) welding of weld joint SEG3013B-263 located on Vertical Plate to Floor Beam at panel point 120 bike path side of OBG Segment 13AW. ZPMC Welder is identified as 045143. ZPMC Quality Control (QC) is identified as Mr. Liu Fang. The welding variables recorded by QC appeared to comply with the Applicable WPS-B-T-2231-ESAB.

This QA inspector observed ZPMC personnel performed Magnetic Testing on back gouging area, prior to the repair welding on vertical shear plate to bottom plate 'T' joint of OBG Segment 14W. The weld number is identified as SEG3020BB-019. See the attached picture.

### Bay 19

This QA Inspector observed the following work in progress:

Flux Core Arc Welding (FCAW) welding of weld joint BK25A6-001-068, 069, 074 and 075 located on OBG Bike Path BK25A-001. ZPMC Welder is identified as 062806. ZPMC Quality Control (QC) is identified as Mr. Guo Xing Hui. The welding variables recorded by QC appeared to comply with the Applicable WPS-B-T-2132-ESAB.

FCAW welding of weld joint BK25A6-001-084, 085, 094 and 095 located on OBG Bike Path BK25A-001. ZPMC Welder is identified as 062734. ZPMC Quality Control (QC) is identified as Mr. Guo Xing Hui. The welding variables recorded by QC appeared to comply with the Applicable WPS-B-T-2132-ESAB.

FCAW welding of weld joint BK25A7-001-007, 004, 009 and 010 located on OBG Bike Path BK25A-001. ZPMC Welder is identified as 062806. ZPMC Quality Control (QC) is identified as Mr. Guo Xing Hui. The welding variables recorded by QC appeared to comply with the Applicable WPS-B-T-2132-ESAB.

FCAW welding of weld joint BK25A7-001-015, 016, 021 and 022 located on OBG Bike Path BK25A-001. ZPMC Welder is identified as 062734. ZPMC Quality Control (QC) is identified as Mr. Guo Xing Hui. The welding variables recorded by QC appeared to comply with the Applicable WPS-B-T-2132-ESAB.

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ZPMC personnel performing heat straightening on OBG Suspender Bracket. The Suspender Bracket is identified as SB108E. Distortion appeared to be caused by mishandling of the welding/material. ZPMC Quality Control (QC) inspector identified as Mr. Guo Xing Hui was present to monitor the heat straightening process by natural Gas. The heat straightening appeared to comply with HSR1 (B) number 9955. See the attached pictures.

Unless otherwise noted, all work observed on this date appeared to be in general compliance with the applicable contract documents.



### Summary of Conversations:

Only general conversation was held between QA and QC concerning this project.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact , who represents the Office of Structural Materials for your project.

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**Inspected By:** Kumar,Vibin

Quality Assurance Inspector

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**Reviewed By:** Patel,Hiranch

QA Reviewer